(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 October 2001 (11.10.2001)

PCT

(10) International Publication Number
WO 01/75166 A2

(51) International Patent Classification[7]: C12Q 1/68

(21) International Application Number: PCT/US01/10482

(22) International Filing Date: 30 March 2001 (30.03.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/193,767 31 March 2000 (31.03.2000) US

(71) Applicant: GENENTECH, INC. [US/US]; 1 DNA Way, South San Francisco, CA 94080 (US).

(72) Inventors: LOWE, David, G.; 35 Via Delizia, Hillsborough, CA 94010 (US). MARSTERS James, C., Jr.; 809 McKinley, Oakland, CA 94610 (US). ROBBIE, Edward, P.; 203 Hartford Street, San Francisco, CA 94114 (US). SMITH, Victoria; 19 Dwight Road, Burlingame, CA 94010 (US).

(74) Agents: CONLEY, Deirdre, L. et al.; Genentech, Inc., MS 49, 1 DNA Way, South San Francisco, CA 94080-4990 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/75166 A2

(54) Title: COMPOSITIONS AND METHODS FOR DETECTING AND QUANTIFYING GENE EXPRESSION

(57) Abstract: Compositions and methods for improving detection sensitivity in nucleic acid microarray analysis are disclosed, including methods of purifying nucleic acids, methods of synthesizing fluorescent DNA probes, methods of hybridization, and methods of activating a substrate for target molecule attachment are disclosed.